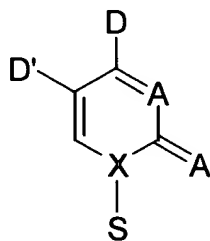


**Amendments to the Claims:**

This listing of claims as required by 37 C.F.R. 1.121 will replace all prior versions and listing of claims in the application.

1. (Previously Amended) An immunostimulatory oligonucleotide compound, comprising an immunostimulatory dinucleotide of formula 5'-pyrimidine-purine-3', wherein the immunostimulatory oligonucleotide compound is at least 6 nucleotides in length, and wherein pyrimidine is a non-natural pyrimidine nucleoside selected from the group consisting of 5-hydroxycytosine, 5-hydroxymethylcytosine, N4-alkylcytosine, aracytosine and 4-thiouracil and purine is a natural or non-natural purine nucleoside.
2. (Previously Amended) An immunostimulatory oligonucleotide compound, comprising an immunostimulatory dinucleotide of formula C\*pG, wherein the immunostimulatory oligonucleotide compound is at least 6 nucleotides in length, and wherein C\* is a cytidine analog selected from the group consisting of 5-hydroxycytosine, 5-hydroxymethylcytosine, N4-alkylcytosine, aracytosine and 4-thiouracil, G is guanosine, 2'-deoxyguanosine, or a guanosine analog, and p is an internucleotide linkage selected from the group consisting of phosphodiester, phosphorothioate, and phosphorodithioate.
3. (Previously Amended) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside has the formula (I):



wherein D is a hydrogen bond donor, D' is selected from the group consisting of hydrogen, hydrogen bond donor, hydrogen bond acceptor, hydrophilic group,

hydrophobic group and electron donating group, A is a hydrogen bond acceptor or a hydrophilic group, X is carbon or nitrogen, and S is a pentose or hexose sugar ring, provided that the pyrimidine nucleoside of formula (I) is not cytidine or deoxycytidine.

4. (Canceled)
5. (Canceled)
6. (Previously Amended) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-naturally occurring pyrimidine base is selected from the group consisting of 5-hydroxycytosine and N4-ethylcytosine.
7. (Previously Amended) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside of formula (I) comprises a non-naturally occurring sugar moiety.
8. (Previously Amended) The immunostimulatory oligonucleotide compound of claim 7, wherein the non-naturally occurring sugar moiety is arabinose and arabinose derivatives.
- 9-38. (Cancelled)
39. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is 5-hydroxycytosine.
40. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is 5-hydroxymethylcytosine.
41. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is N4-alkylcytosine.
42. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is aracytosine.
43. (Previously Presented) The immunostimulatory oligonucleotide compound of claim 1, wherein the non-natural pyrimidine nucleoside is 4-thiouracil.